

## CLAIMS

We claim the following:

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1. A system for evaluating one or more color scales comprising:

an input interface that receives one or more color scales, and one or more test patterns;

5 one or more color output devices; and

an evaluation process that applies the color scales to the test pattern to determine which of the color scales can be used to create color-coded images on the color output device without violating the condition of perceptual ordering by more than a tolerance.

2. A system, as in claim 1, where the evaluation process warns the user when a color scale can  
10 not be used to create color-coded images on the color output device without violating the condition of perceptual ordering by more than a tolerance.

3. A system, as in claim 1, further comprising a rating process used to evaluate the colors scales as determined by a perceptual ordering of the test pattern by the user where the respective color scale is used to render the test pattern to the user.

4. A system, as in claim 1, where the color output device includes any one or more of the following: a user computer interface, a graphical user interface, an electronic color display, a color printer, a television monitor, and a medical equipment interface

5. A system, as in claim 1, where one or more color reproduction characteristics of the color  
5 output device are unknown.

6. A system, as in claim 1, where an ambient illumination environment of the color output device is unknown.

7. A system, as in claim 1, where a quality of the user's color vision is unknown.

8. A method for evaluating one or more color scales comprising the steps of:

10 receiving one or more color scales, and one or more test patterns; and

applying the color scales to the test pattern to determine which of the color scales can be used to create color-coded images on the color output device without violating the condition of perceptual ordering by more than a tolerance.

9. A computer program product having a stored computer program comprising the steps of:

15 receiving one or more color scales, and one or more test patterns; and

applying the color scales to the test pattern to determine which of the color scales can be used to create color-coded images on the color output device without violating the condition of perceptual ordering by more than a tolerance.

10. A system for evaluating one or more color scales comprising:

5 means for receiving one or more color scales, and one or more test patterns; and

means for applying the color scales to the test pattern to determine which of the color scales can be used to create color-coded images on the color output device without violating the condition of perceptual ordering by more than a tolerance.